Prostate-Specific Transcript from TCRγ locus

```
                                GGGCAAGAGTTGGGCAAAAAAATCAAGGTATTTGGTCCCGGAACAAAGCTTATCATTACA   60
                                <---------------------- J gamma 1.2 ---------------------->
                                                                                20
                        M  Q  M  F  P  P  S  P  L  F  F  F  L  Q  L  L  K  Q  S  S  R  R

GATAAACAACTTGATGCAGATGTTTCCCCCAAGCCCACTATTTTTCTTCCTTCAATTGCTGAAACAAAGCTCCAGAAGGC  140
<---------------------------- C gamma 1 (exon CI) ------------------------------
                                                        40
L  E  H  T  F  V  F  L  R  N  F  S  L  M  L  L  R  Y  I  G  K  K  R  R  A  T  R

TGGAACATACCTTTGTCTTCTTGAGAAATTTTTCCCTGATGTTATTAAGATACATTGGCAAGAAAAGAAGAGCAACACGA  220
------------------------------------------------------------------------------
                  58
 F  W  D  P  R  R  G  T  P
                                M  K  T  N  D  T  Y  M  K  F  S  W  L  T  V  P  E  K
TTCTGGGATCCCAGGAGGGGAACACCATGAAGACTAACGACACATACATGAAATTTAGCTGGTTAACGGTGCCAGAAAAG  300
------------------------------------------------------------------------------
   20                                                                        40
 S  L  D  K  E  H  R  C  I  V  R  H  E  N  N  K  N  G  V  D  Q  E  I  I  F  P  P
TCACTGGACAAAGAACACAGATGTATCGTCAGACATGAGAATAATAAAAACGGAGTTGATCAAGAAATTATCTTTCCTCC  380
------------------------------------------------------------------------------
                                                    60
  I  K  T  D  V  I  T  M  D  P  K  D  N  C  S  K  D  A  N  D  T  L  L  L  Q  L
AATAAAGACGGATGTCATCACAATGGATCCCAAAGACAATTGTTCAAAAGATGCAAATGATACACTACTGCTGCAGCTCA  460
---------><------------ C gamma 1 (exon CII) ------------><----------------------
                                80
T  N  T  S  A  Y  Y  M  Y  L  L  L  L  L  K  S  V  V  Y  F  A  I  I  T  C  C  L
CAAACACCTCTGCATATTACATGTACCTCCTCCTGCTCCTCAAGAGTGTGGTCTATTTTGCCATCATCACCTGCTGTCTG  540
---------------------------- C gamma 1 (exon CIII) ----------------------------
   100                                 111
 L  R  R  T  A  F  C  C  N  G  E  K  S
CTTAGAAGAACGGCTTTCTGCTGCAATGGAGAGAAATCATAACAGACGGTGGCACAAGGAGGCCATCTTTTCCTCATCGG  620
--------------------------------------->

TTATTGTCCCTAGAAGCGTCTTCTGAGGATCTAGTTGGGCTTTCTTTCTGGGTTTGGGCCATTTCAGTTCTCATGTGTGT  700

ACTATTCTATCATTATTGTATAACGGTTTTCAAACCAGTGGGCACACAGAGAACCTCACTCTGTAATAACAATGAGGAAT  780

AGCCACGGCGATCTCCAGCACCAATCTCTCCATGTTTTCCACAGCTCCTCCAGCCAACCCAAATAGCGCCTGCTATAGTG  860

TAGACATCCTGCGGCTTCTAGCCTTGTCCCTCTCTTAGTGTTCTTTAATCAGATAACTGCCTGGAAGCCTTTCATTTTAC  940

ACGCCCTGAAGCAGTCTTCTTTGCTAGTTGAATTATGTGGTGTGTTTTTCCGTAATAAGCAAAATAAATTTAAAAAAATG 1020

AAAAGTT 1027
```

Underlined sequences are:

- Transcription Initiation Site (within GCAAGAG sequence)
- Polyadenylation Signal (AATAAA)

Double Underlined sequences are:

- Possible Translation Initiation Codons (ATG)

FIG. 1

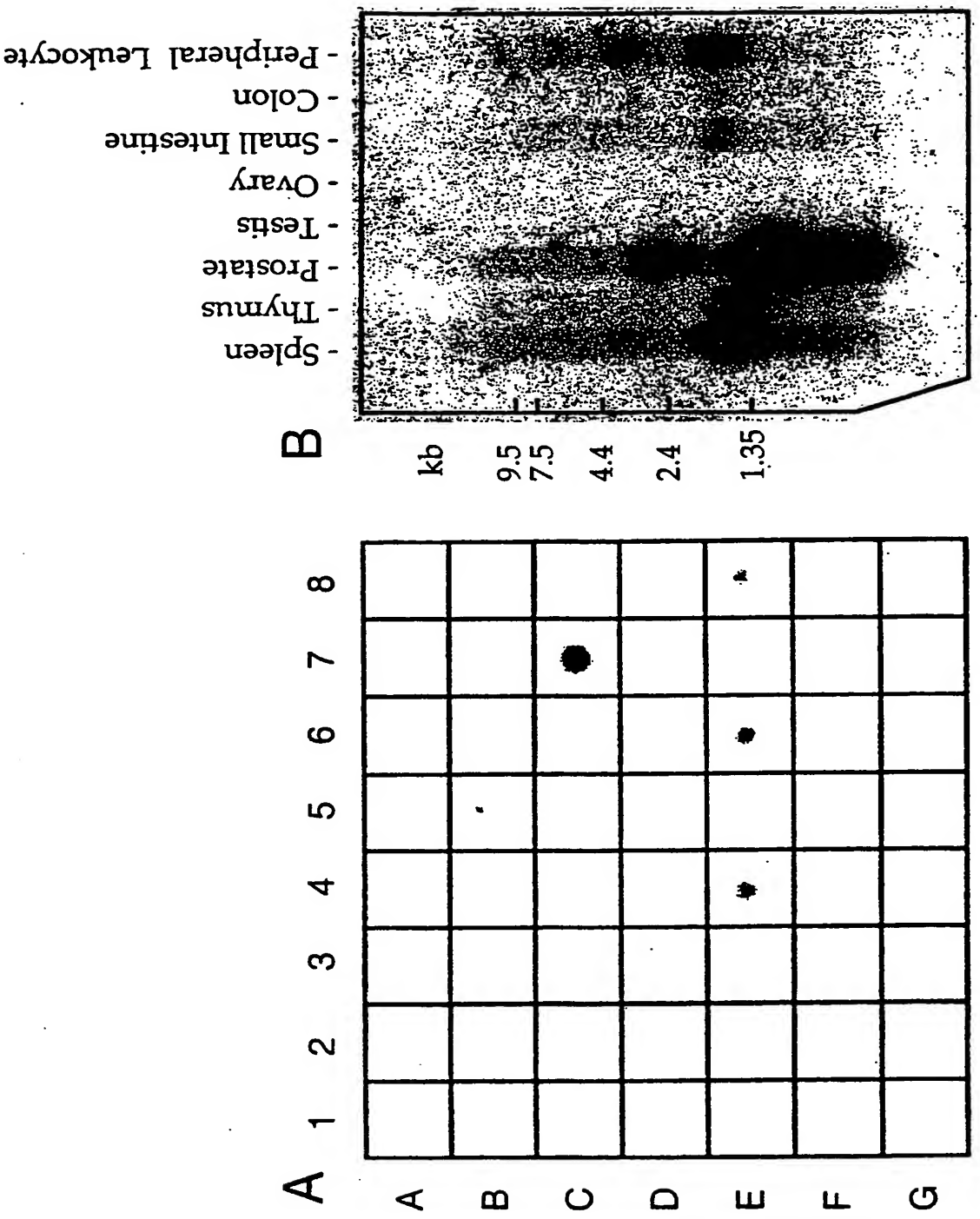

A
1
2
3
4
5
6
7
8
A
B
C
D
E
F
G
B
kb
9.5
7.5
4.4
2.4
1.35
- Spleen
- Thymus
- Prostate
- Testis
- Ovary
- Small Intestine
- Colon
- Peripheral Leukocyte

FIG. 2

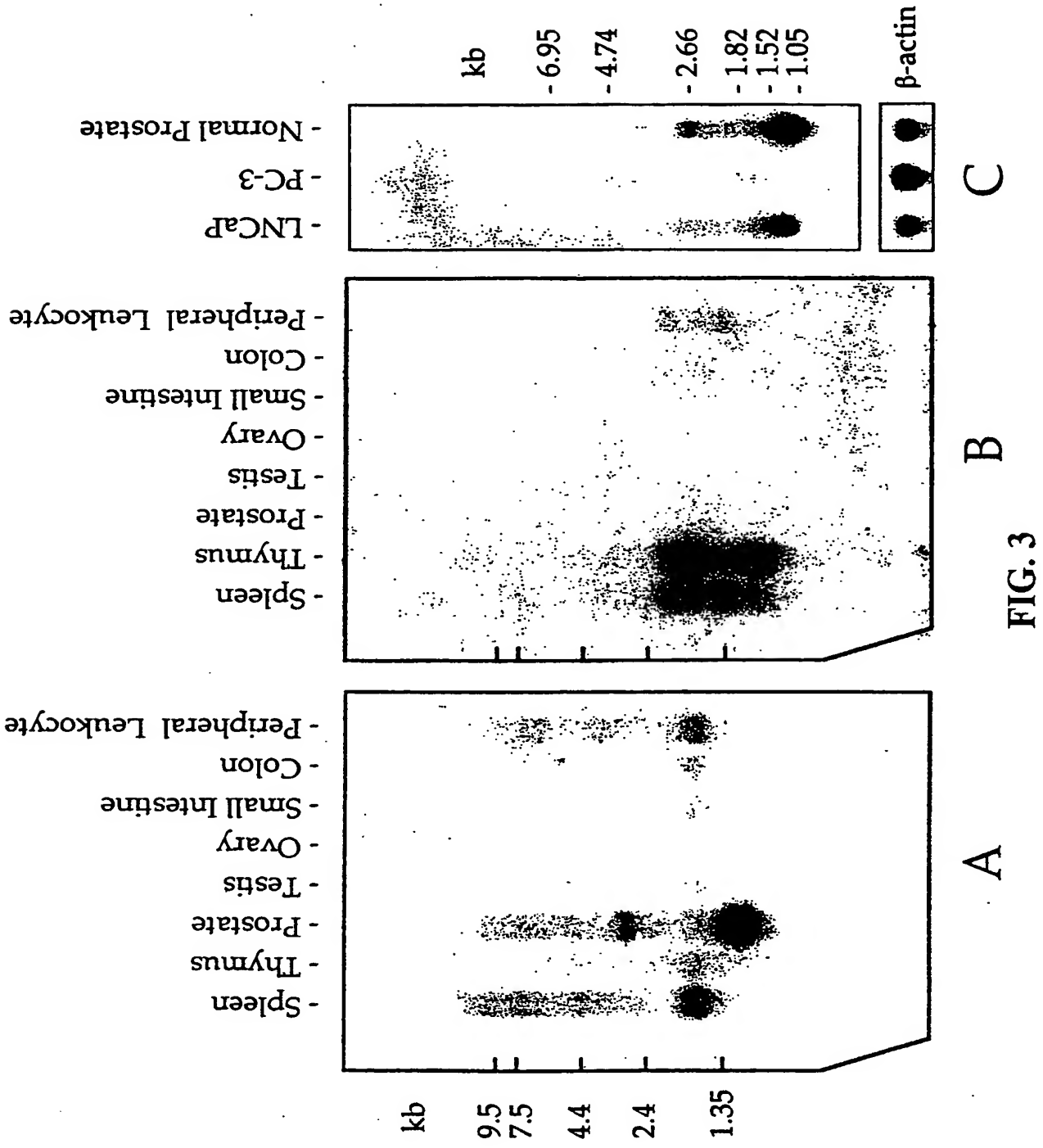

A
kb
9.5
7.5
4.4
2.4
1.35
- Spleen
- Thymus
- Prostate
- Testis
- Ovary
- Small Intestine
- Colon
- Peripheral Leukocyte
B
- Spleen
- Thymus
- Prostate
- Testis
- Ovary
- Small Intestine
- Colon
- Peripheral Leukocyte
C
kb
- 6.95
- 4.74
- 2.66
- 1.82
- 1.52
- 1.05
β-actin
- LNCaP
- PC-3
- Normal Prostate

FIG. 3

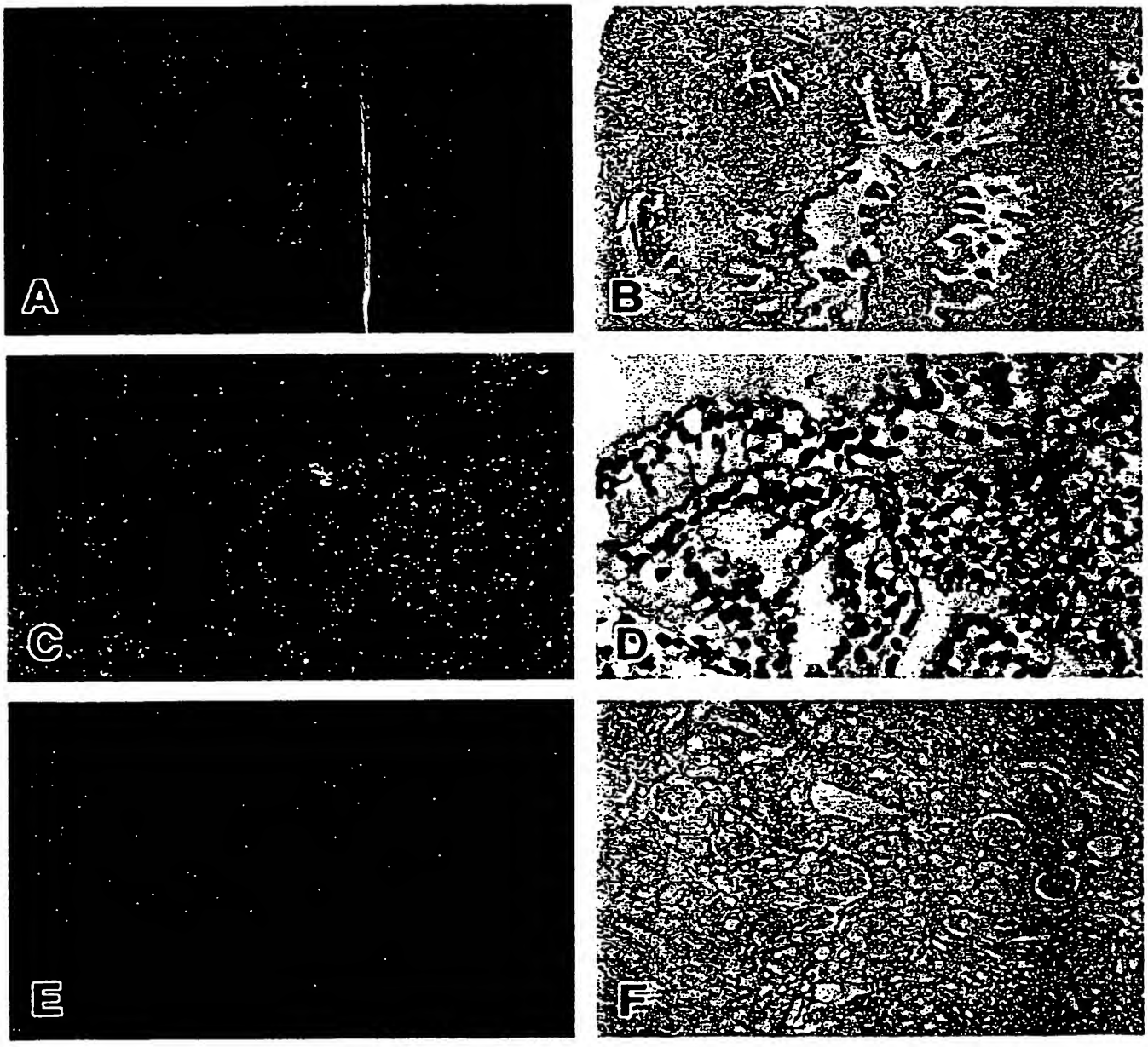


FIG. 4

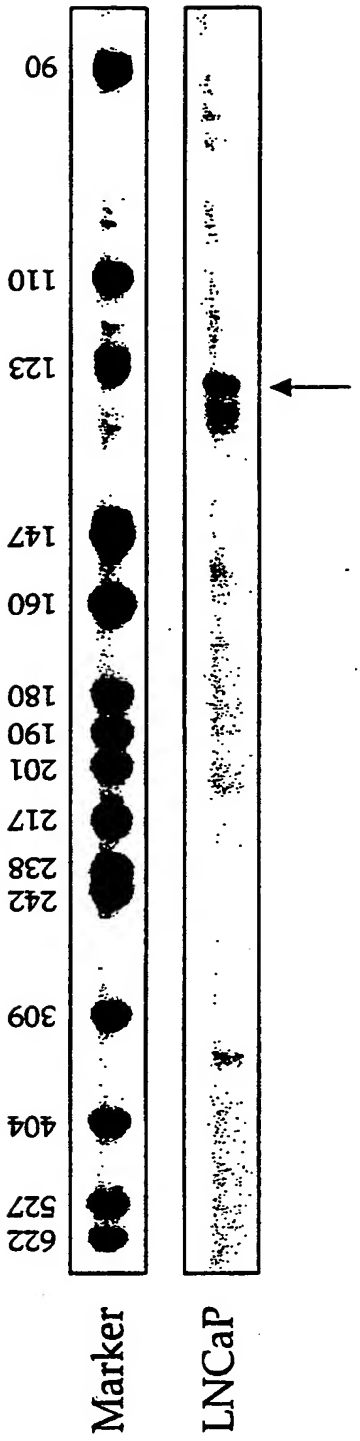

90
110
123
147
160
180
190
201
217
238
242
309
404
527
622
Marker
LNCaP

FIG. 5

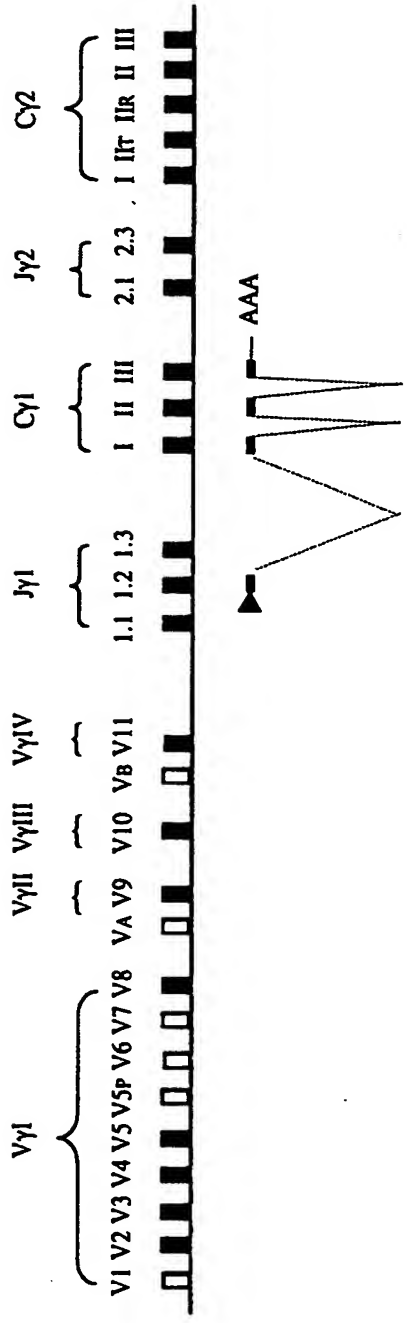

Vγ1
V1 V2 V3 V4 V5 V5P V6 V7 V8
VγII VγIII VγIV
VA V9 V10 VB V11
Jγ1
1.1 1.2 1.3
Cγ1
I II III
Jγ2
2.1 2.3
Cγ2
I IIF IIR II III
AAA

FIG. 6

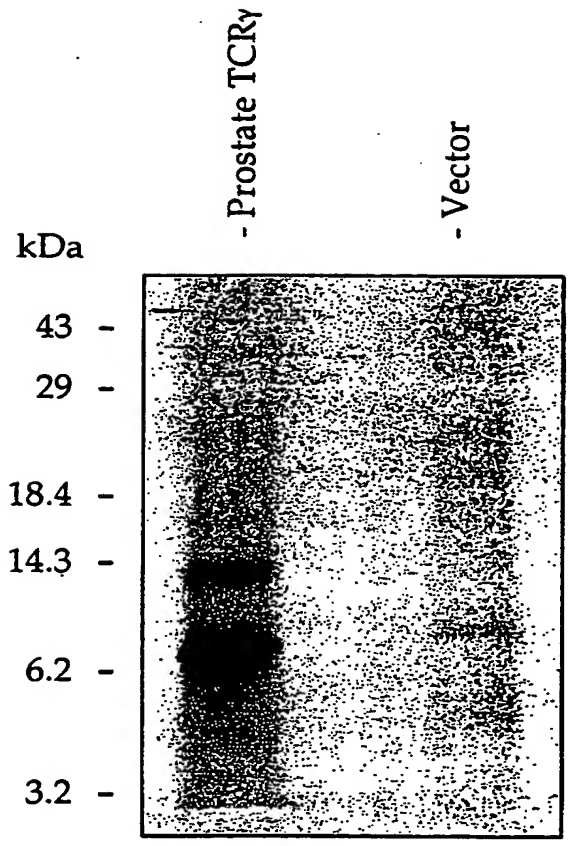
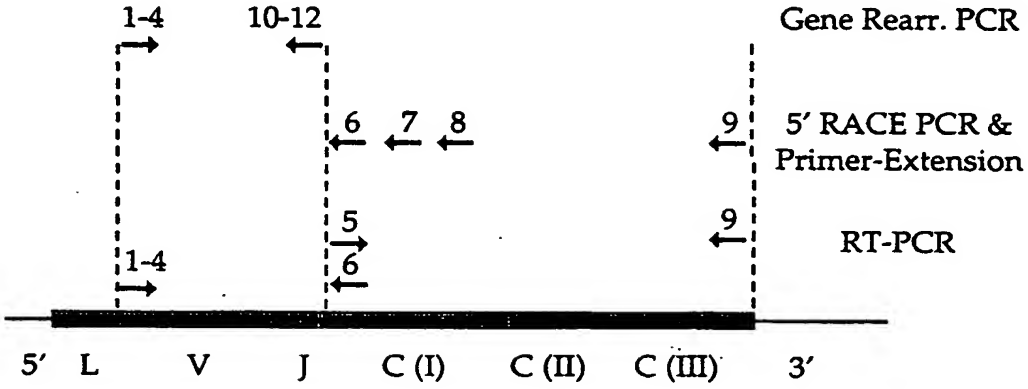


FIG. 7

TABLE 1. Primers (→) used for analysis of the prostate TCRγ transcript

(A)



(B)

Name	Annealing	Primer Sequence 5′ -> 3′
1. TCRVγI.F	Vγ, subgroup I	AACTTGGAAGGGRGAACRAAGTCAGTC
2. TCRVγII.F	Vγ, subgroup II	AGTACTAAAACGCTGTCAAAAACAGCC
3. TCRVγIII.F	Vγ, subgroup III	TTGGACTTGGATTATCAAAAGTGG
4. TCRVγIV.F	Vγ, subgroup IV	TTGGGCAGTTGGAACAACCTGAAA
5. TCRCγ.F	Cγ, exon CI	GATAAACAACTTGATGCAGATGTTTCCC
6. TCRCγ.R1	Cγ, exon CI	GGGAAACATCTGCATCAAGTTGTTTATC
7. TCRCγ.R2	Cγ, exon CI	CTGGAGCTTTGTTTCAGCAATTGAAGG
8. TCRCγ.R3	Cγ, exon CI	CTCAAGAAGACAAAGGTATGTTCCAGC
9. TCRCγ.R4	Cγ, exon CIII	TTATGATTTCTCTCCATTGCAGCAG
10. TCRJγ1.1.R	Jγ1.1	GAAGTTACTATGAGCTTAGTCCCTT
11. TCRJγ1.2.R	Jγ1.2	AAGCTTTGTTCCGGGACCAAATAC
12. TCRJγ1.3.R	Jγ1.3	TACCTGTGACAACAAGTGTTGTTC
		R=A+G

FIG. 8

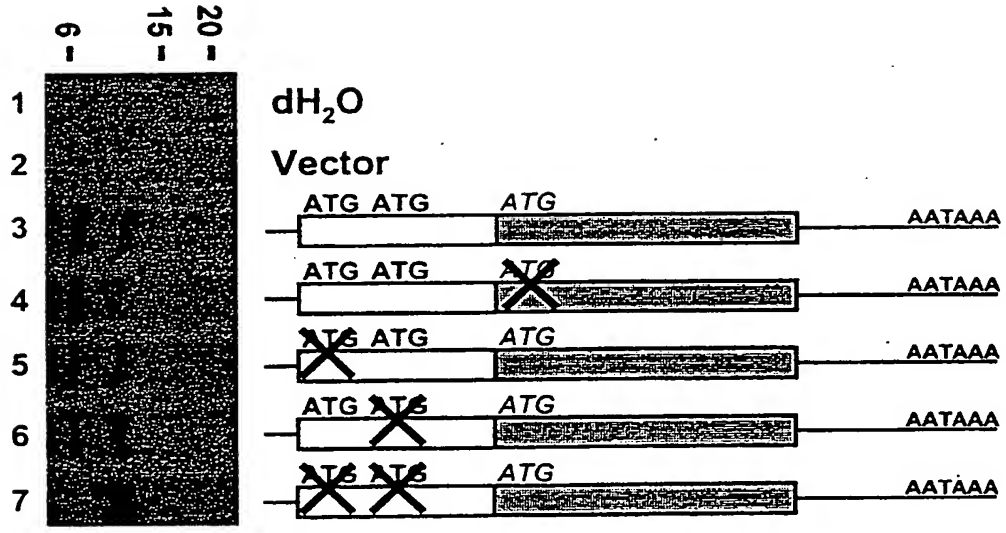


FIG. 9

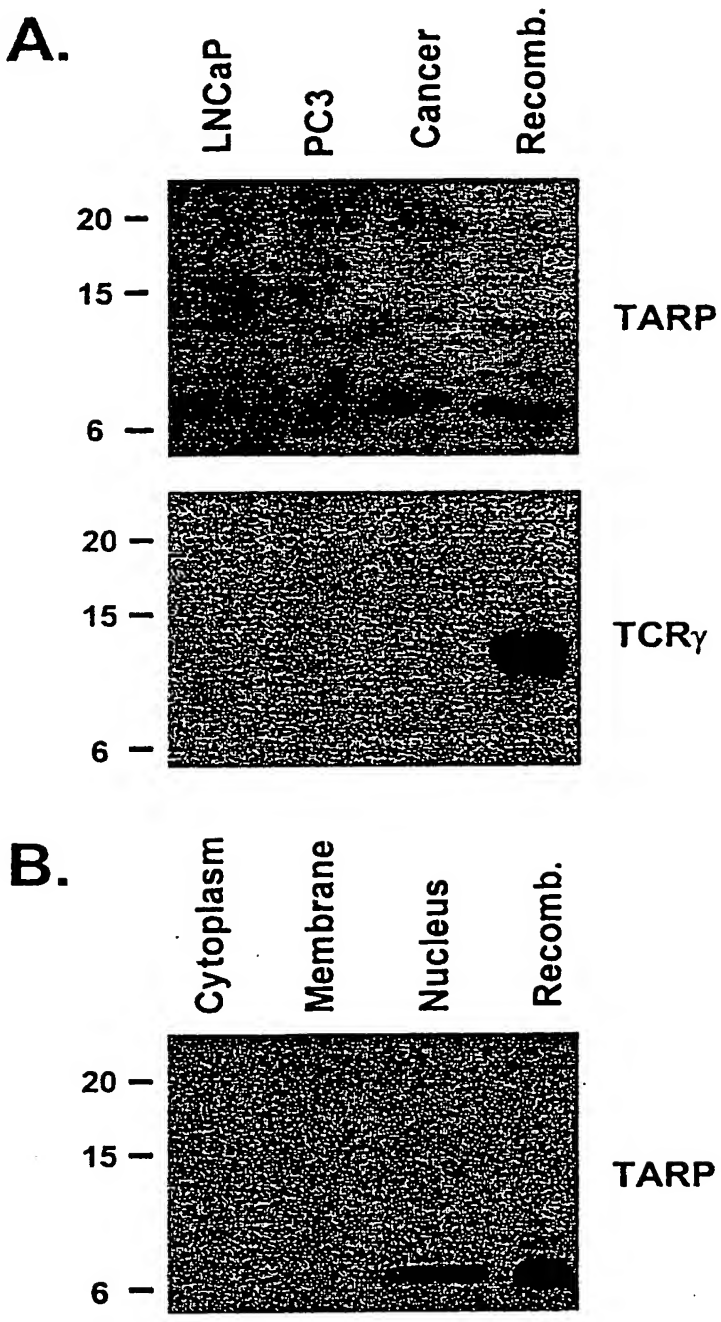

A.
LNCaP
PC3
Cancer
Recomb.
20
15
6
TARP
20
15
6
TCRγ
B.
Cytoplasm
Membrane
Nucleus
Recomb.
20
15
6
TARP

FIG. 10

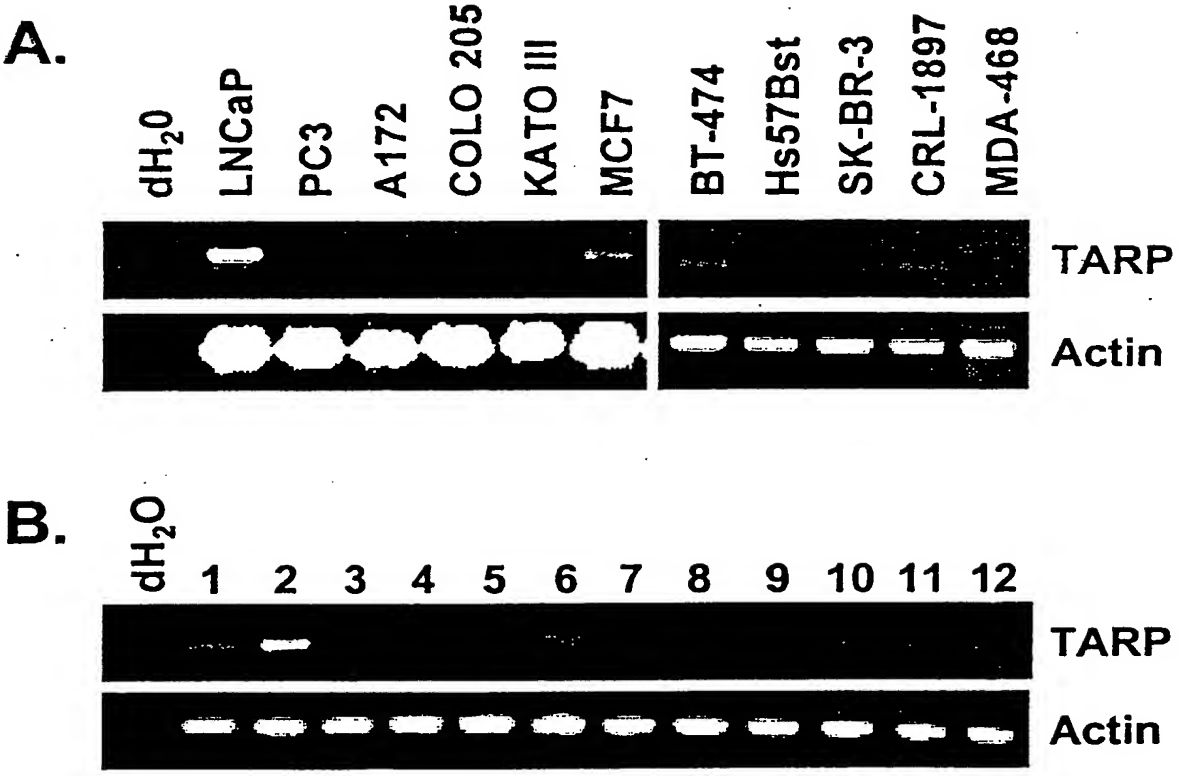

A.
dH2O
LNCaP
PC3
A172
COLO 205
KATO III
MCF7
BT-474
Hs57Bst
SK-BR-3
CRL-1897
MDA-468
TARP
Actin
B.
dH2O
1 2 3 4 5 6 7 8 9 10 11 12
TARP
Actin

FIG. 11

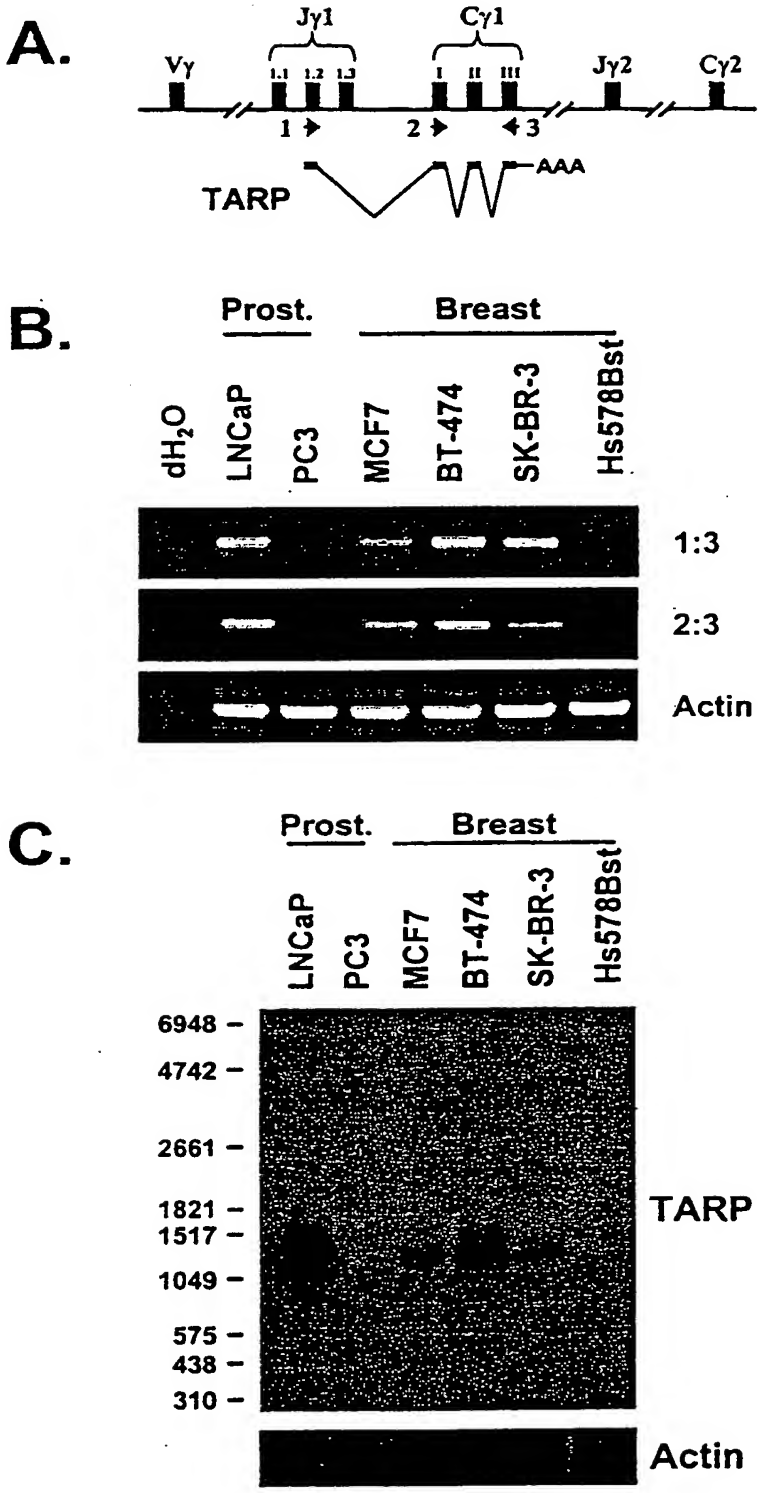

A.
Jγ1
Cγ1
Vγ
1.1 1.2 1.3
I II III
Jγ2
Cγ2
1
2
3
AAA
TARP
B.
Prost.
Breast
dH2O
LNCaP
PC3
MCF7
BT-474
SK-BR-3
Hs578Bst
1:3
2:3
Actin
C.
Prost.
Breast
LNCaP
PC3
MCF7
BT-474
SK-BR-3
Hs578Bst
6948
4742
2661
1821
1517
1049
575
438
310
TARP
Actin

FIG. 12

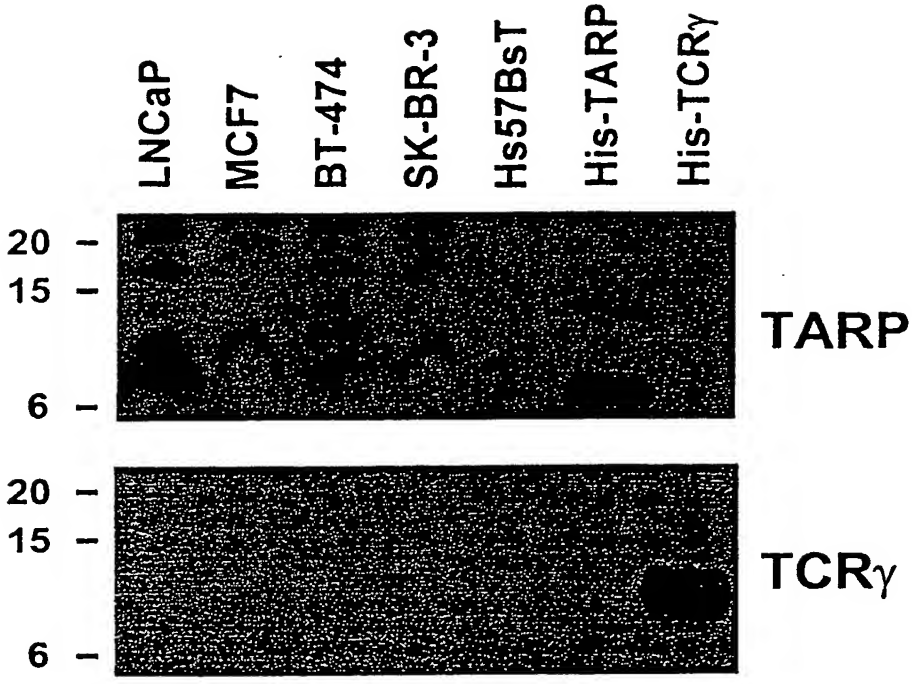

LNCaP
MCF7
BT-474
SK-BR-3
Hs57BsT
His-TARP
His-TCRγ
20
15
6
TARP
20
15
6
TCRγ

FIG. 13

A.

MQMFPPSPLFFFLQLLKQSSRR

LEHTFVFLRNFSLMLLRYIGKKR

RATRFWDPRRRGTP

B.

TARP	G	K	K	R	R	A	T	R	F	W	D	P	R	R	G	T
DTUP1	G	S	K	D	R	S	V	Q	F	W	D	P	R	N	G	T
YTUP1	G	S	K	D	R	G	V	L	F	W	D	K	K	S	G	N

FIG. 14